Polycom[®] KIRK[®] Wireless Server 8000

Installation Guide



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Contents

KWS8000 Installation

Installing the KWS80001-
Specifications1-
General Installation Information1-
Installing the KWS8000 in a Rack1-
Installing the KWS 8000 on a Flat Surface1-
Installing the KWS8000 on a Wall1-
Connecting the KWS8000 Cables1-
Installing Interface Cards and CPU Cards1-
Replacing Components
Component Replacement2-
Component Replacement Precautions
Regulatory Notices
International Regulatory and Product Information3-
Important Safety Instructions and Product Information3-

KWS8000 Installation

This guide describes how you install the KWS8000.

Installing the KWS8000

The KWS 8000 can be installed in a rack, on a flat surface or on a wall using the KWS8000 Wall Hanger. Before you start the installation, place the KSW 8000 on a stable flat surface in the selected location, and inspect the package for any damage and report it to the reseller or distributor immediately.

Important Please review all the safety instructions for important safety and regulatory information.

Specifications

Table 1-1 Physical dimensions

Physical dimensions	
Height	177mm
Width	422 mm
Depth	328 mm
Weight	5.34 kg (Excl. power supply)

Table 1-2Power supply

Power supply		
AC Input	100-240 VAC, 50/60 Hz	

Table 1-3 Power consumption

Power consumption	
Typical AC Power Consumption	90 Watt
Max. AC Power Consumption	Max 360 Watt

Table 1-4 Environment

Environment	
Operating temperature	0°C - 40°C (22° - 104°F)
Storage temperature	-30°C - 70°C (40° - 158°F)
Relative humidity	20% - 80% Non condensing
Operating altitude	Up to 2,000 m (6,500 ft)
Operating ESD level	4 KV

General Installation Information

The maximum number of KWS 8000 units that can be linked together depends on the mounting method and the maximum length of the link cable:

• Rack mount: 8 units

Flat surface mount: 2 units

• Wall mount: 1 unit

General Mounting Safety Precautions

- Keep the area around the KWS8000 clean and free of clutter.
- Decide on a suitable location for the equipment rack that will hold the KWS8000 unit. It should be situated in a clean, dry, dust-free area that is well ventilated. Avoid areas where heat, electrical noise and electromagnetic fields are generated.
- Place it near a grounded power outlet.

Installing the KWS8000 in a Rack

Before you start installation take notice of the following safety precautions.

Rack mounting Safety Precautions.

- Ensure that the leveling jacks on the bottom of the rack are fully extended to the floor with the full weight of the rack resting on them.
- In a single rack installation, stabilizers should be attached to the rack.
- In multiple rack installations, the racks should be coupled together.
- Always make sure the rack is stable before extending a component from the rack.
- You should extend only one component at a time extending two or more simultaneously may cause the rack to become unstable.
- Before you install the rails, determine the placement of each component in the rack.
- Install the heaviest components on the bottom of the rack first, and then work up.
- Always keep the rack's trays and board's closed when not servicing, to maintain proper cooling.
- The rack ambient temperature may rise beyond room ambient temperature in a multi unit assembly, measures must be taken to ensure the KWS8000 ambient temperature does not exceed the maximum operating ambient temperature of 40 °Celsius.
- To ensure ventilation always leave 2/3 U between the KWS8000 units any other units mounted in the rack.
- Always ensure proper rack earthing.

To Install the KWS8000 in a Rack

You can install the KWS8000 in a rack using one of the two following methods:

- >> Install the brackets supplied by the rack manufacturer on each side of the rack on which the KWS 8000 is placed. Secure the system by fastening four screws to the rack on the front panel.
- >> Install a shelf supplied by the rack manufacturer on top of which the KWS8000 is placed. Secure the system by fastening four screws to the rack on the front panel.



Figure 1-1 Rack Installation

Installing the KWS 8000 on a Flat Surface

Before you start installation take notice of the following safety precautions.

Flat Surface Mounting Safety Precautions

- Ensure the surface can support the weight of the unit.
- Never install the KWS8000 on the floor.
- Never place anything, except ONE additional KWS8000 unit, on top of the KWS8000. The top plate must be free to allow sufficient cooling.

To Install the KWS 8000 on a Flat Surface

1 Remove the KWS8000 from its package.

- **2** Before placing the unit, carefully turn it upside down and mount the four rubber pads supplied in the package. One must be placed at each corner of the bottom plate.
- **3** Place it on a clean, flat, horizontal surface.

Installing the KWS8000 on a Wall

Before you start installation take notice of the following safety precautions.

Wall Mounting Safety Precautions

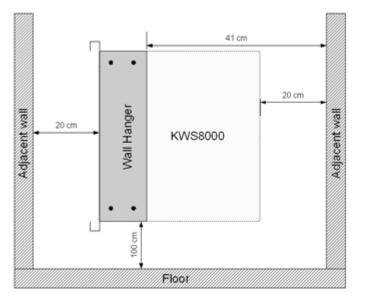
- Ensure the wall quality is good enough for holding the unit. Avoid high-porous surfaces, joints and similar.
- Never use countersunk screws.
- Leave at least 10 centimeter of free air above the unit for ventilation.

To Install the KWS8000 Using the Wall Hanger

For free hanging installations, you use the wall hanger.

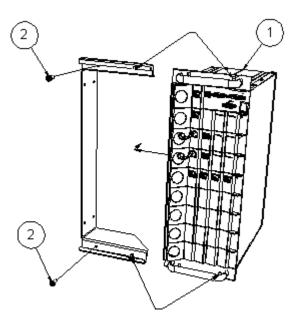
1 Find a suitable spot on an even closed-textured surface. The unit should be placed minimum 1 meter above ground surface and minimum 20 centimeter from any corner.

Figure 1-2 Wall hanger positioning



- 2 Mount the wall hanger securely using four screws. Use rawlplugs, expansion bolts or other appropriate fastening methods in relation to the wall material.
- **3** Remove drilling dust, unpack the KWS8000, fit it into the wall hanger, and then fasten the two front screws.

Figure 1-3 Fitting the kWS8000 into the wall hanger



Connecting the KWS8000 Cables

When the KWS8000 has been mounted, the cables can be connected.

Cable Safety Precautions

Before you connect the cables, ensure to take the following electrical safety precautions.

- Always use an earthed socket for power.
- Use a power cord with protective earth (PE) connection suitable for the country where it is being used and with the appropriate local approvals.
- If using a rack, always ensure proper rack earthing
- Power supply cables must be connected prior to connecting any interface cables.

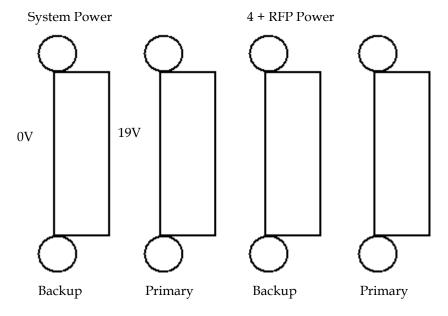
- The interface cables must be removed before any interface card is removed or replaced.
- When unplugging power, unplug AC mains power first before unplugging the power connector from the KWS8000.
- The AC adapters must never be hanging by their own weight in the AC mains connector or the output connector.

To Connect Power Cables

The KWS8000 has four power plugs on the back panel behind the sliding doors:

- System Power Backup
- System Power Primary
- 4+ BIF Power Backup
- 4+ BIF Power Primary

Figure 1-4 KWS 8000 Power plugs



The unit configuration determines which plugs to use. Connect the plugs according to the following table.

Table 1-5 Cable plugs overview

#	Nbr BIF Card s	Redun- dancy	SYS PWR Primary	SYS PWR Backup	4+ BIF PWR Primary	4+ BIF PWR Backup	BIF Card Place- ment
1	≤4	No	Connect	No Connect	No Connect	No Connect	Slot 4-7
2	≤4	Yes	Connect	Connect	No Connect	No Connect	Slot 4-7
3	>4	No	Connect	No Connect	Connect	No Connect	Slot 0-7
4	>4	Yes	Connect	Connect	Connect	Connect	Slot 0-7

- 1 Plug a suitable power cord into the AC power adapter.
- 2 Insert the AC power adapter output connector firmly into the socket on the KWS8000 so that the retention clip snaps to the plug.
- **3** Plug the AC power adapter into mains.
- **4** If more than one AC power adapter is to be connected, the primary system power must be connected first, the rest does not have to be done in any particular order.
- **5** When powering down the unit, ALL power connectors must be unplugged to ensure the unit is completely powered off.

Two AC power adapters may be kept in the room behind the sliding doors at the rear of the KWS8000. Installation must be done prior to connecting the adapters to AC mains.

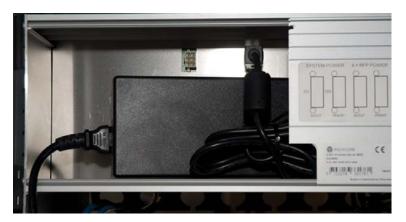


Figure 1-5 Storing room for two AC power adapters

If more than two AC power adapters are used, these must be kept on a flat surface (same requirements as for the KWS8000 unit). In a rack installation the power adapters can be kept on a tray installed for the purpose provided that the ambient temperature is below 32° C, and they have free air surrounding them.

Installing Interface Cards and CPU Cards

Before you install an interface or a CPU card ensure to take the following precautions.

Safety Precautions

Cards contain static sensitive circuitry and may be destroyed or damaged by electrostatic discharge (ESD).

- Make sure you re using proper ESD equipment to prevent damage to the system.
- Fill all empty slots with blanking front plates to close the front.

To Install Interface Cards

1 With two hands, gently slide the interface card into the unit. Give it a gentle push on the last centimeter so that it enters the backplane connector properly.

Avoid pushing on the front connectors - push only on the plastic parts at the top and bottom.



Figure 1-6 Installing Interface cards

Plug the interface cables into the card as described in "Connecting Interface Cables" on page 1-11.

To Install CPU Cards

- 1 Ensure that the KWS8000 is powered off completely.
- **2** With two hands, gently slide the card into the unit. Give the card a gentle push on the last centimeter so that it enters the backplane connector properly.

Avoid pushing on the front connectors - push only on the plastic parts at the top and bottom.

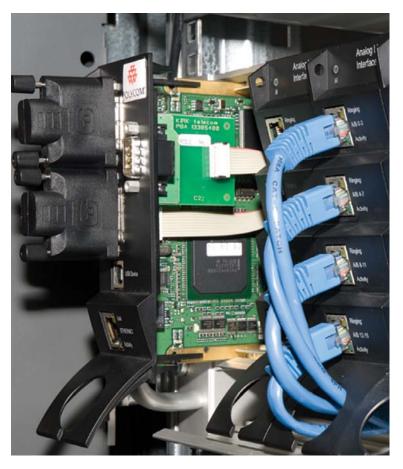


Figure 1-7 Installing CPU card

- 3 Plug the interface cables into the card as described in "Connecting Interface Cables" on page 1-11.
- **4** Connect the power and reboot the unit.

Connecting Interface Cables

The front interface of the KWS8000 is provided with connectors for the different interfaces provided. Please see the KWS8000 User Guide for the actual pin-out of the different connectors.

The cables can be harnessed in two ways as shown in the following figures depending on the installation requirements.



Figure 1-8 Harnessing cables to the back and out



Figure 1-9 Harnessing cables to the side and out.

Regardless of which way is used for harnessing, you must guide the cables through the opening in the plastic front. This ensures safe retention of the cable.

Replacing Components

The KWS8000 is designed to minimize down-time. Several components can be replaced while the system is up.

Component Replacement

The following components are hot-swappable:

- Interface cards
- AC adapters

The following require a power down of the system:

- Backplane
- CPU card

Before replacing any components, take notice of the component replacement precautions.

Component Replacement Precautions

- Cards contain static sensitive circuitry and may be destroyed or damaged by electrostatic discharge (ESD.)
- All maintenance tasks must be performed by qualified, authorized personnel only.
- Use only original replacement parts.
- Make sure you are using proper ESD equipment, to prevent damage to the system.
- Fill all empty slots with blanking front plates to close the front.

Replacing Interface and CPU cards

Note If you are going to replace more than one card, wait 30 seconds after the first card has been installed before you install the next card. This gives the system time to recognize each card.

To Replace a New Hot-swappable Card

- 1 Ensure the KWS8000 unit is properly earthed.
- **2** Unplug all interface cables on the card that needs to be replaced, noticing which goes where.
- **3** Remove the cables from the opening in the plastic front.
- 4 With two hands, gently pull out the card.
- **5** Gently slide the new card into the unit. Give it gentle push on the last centimeter so that it enters the backplane connector properly. Avoid pushing on the front connectors, push only on the plastic parts at the top and bottom.
- **6** Plug the interface cables into the card.

To Replace or Install a New CPU Card

- 1 Power off the KWS8000 completely.
- **2** Ensure the KWS8000 unit is properly earthed.
- **3** Unplug all interface cables on the card.
- **4** Remove the cables from the opening in the plastic front.
- **5** With two hands, gently pull out the card.
- **6** Gently slide the new card into the unit. Give it gentle push on the last centimeter so that it enters the backplane connector properly. Avoid pushing on the front connectors, push only on the plastic parts at the top and bottom.

- **7** Plug the interface cables into the card.
- **8** Connect power and reboot the unit.

Replacing the Backplane

The backplane cannot be replaced on-site. The chassis will have to be returned for repair or be replaced with a new one. If a new chassis is to be installed, you can move the cards from the faulty chassis to the new one.

To Replace an AC Adapter.

- >> Check to see if unit has a backup supply attached. If yes, then unplug the faulty one and replace it with a new one.
- >> If the unit has no backup supply, plug the new AC adapter into the appropriate backup plug and remove the faulty AC adapter.

Regulatory Notices

This section contains important safety regulations for the KWS8000.

International Regulatory and Product Information

United States Federal Communication
Commission (FCC)

Part 15: Class A Statement. This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. Test limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses and can radiate radio-frequency energy and, if not installed and used in accordance with the instruction manuals, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference, in which case the user will be required to correct the interference at his or her own expense.

Part 68: Network Registration Number. This equipment is registered with the FCC in accordance with Part 68 of the FCC Rules. This equipment is identified by the FCC registration number.

If requested, the FCC registration Number and REN must be provided to the telephone company.

Any repairs to this equipment must be carried out by

Polycom Inc. or our designated agent. This stipulation is required by the FCC and applies during and after the warranty period.

United States Safety Construction Details:

- o All connections are indoor only.
- o No direct connections to public networks.
- o Unit is intended for RESTRICTED ACCESS LOCATION.
- o Unit is to be installed in accordance with the National Electrical Code.
- o The branch circuit overcurrent protection shall be rated 20 A for the AC system.
- o This equipment has a maximum operating ambient of 40°C, the ambient temperature in the rack shall not exceed this temperature

CE Mark R&TTE Directive

Polycom Inc., declares that the Polycom KWS 8000 is in conformity with the following relevant harmonized standards:

EN 60950-1:2006 EN 55022:2006 EN 55024:1998, A1:2002, A2:2003

Following the provisions of the Council Directive 1999/CE on radio and telecommunication terminal equipment and the recognition of its conformity.

This KIRK product has been marked with the CE mark. This mark indicates compliance with EEC Directives 89/336/EEC, 73/23/EEC 1999/5/EC. A full copy of the Declaration of Conformity can be obtained from Polycom Ltd, 270 Bath Road, Slough, Berkshire, SL1 4DX, UK.

The WEEE Marking on this equipment indicates that the product must not be disposed of with unsorted waste, but must

be collected separately.





Canadian Department of Communications

This Class [A] digital apparatus complies with Canadian ICES-003.

Notice: The Industry Canada label identifies certified equipment. This certification means that the equipment meets telecommunication network protective, operational and safety requirements as prescribed in the appropriate Terminal Equipment Technical Requirements document(s). The Department does not guarantee the equipment will operate to the user's satisfaction.

Before installing this equipment, users should ensure that it is permissible to be connected to the facilities of the local telecommunications company. The equipment must also be installed using an acceptable method of connection. The customer should be aware that compliance with the above conditions may not prevent degradation of service in some situations. Repairs to certified equipment malfunctions, may give the telecommunications company causes to request the user to disconnect the equipment.

Users should ensure for their own protection that the electrical ground connections of the power utility, telephone lines and internal metallic water pipe system, if present, are connected together. This precaution may be particularly important in rural areas.

Caution: Users should not attempt to make such connections themselves, but should contact the appropriate electric inspection authority, or electrician, as appropriate.

Important Safety Instructions and Product Information

Before using your telephone equipment, you should always follow basic safety instruction to reduce the risk of fire, electrical shock and injury to persons, and damage to property.

- 1 Read and understand all instructions
- **2** Follow all warnings and instructions including those marked on the product
- **3** Unplug this product before cleaning. Do not use liquid cleaners or aerosol cleaners. Use damp cloth for cleaning
- 4 Do not install the telephone equipment in the bathroom or near a wash bowl, kitchen sink, or laundry tub, in a wet basement, or near a swimming pool
- 5 The product should be operated only from the type of power source indicated on the instructions. If you are not sure of the type of power supply, consult your dealer or local power company.
- **6** Do not overload wall outlets and extension cords as this can result in fire or electrical shock.
- Never push objects of any kind into this product through cabinet slots as they may touch dangerous voltage points or short out parts that could result in fire, electrical shock, or injury. Never spill liquid of any kind into this product.
- **8** To reduce the risk of electrical shock or burns, do not disassemble this product. Opening or removing covers may expose you to dangerous voltages, dangerous electrical current, or other risks. Incorrect reassemble can cause electrical shock when the appliance is subsequently used. If the product need repair, consult your dealer.
- **9** This product does not support connections to outside plant.
- **10** Refer servicing to qualified service personnel under the following conditions:

If liquid has been spilled into the product

If the product has been exposed to rain or water

If the product does not operate normally when following the operating instructions in the manual. Adjust only those controls that are covered by the operation instructions. Improper adjustment of other controls may result in damage and will often require extensive work by qualified service personnel to restore the product to normal operation.

If the product has been dropped or cabinet has been damaged

If the product exhibits a distinct change in performance

Warning

- 1 Avoid using telephone during an electrical storm. There may be a risk of electrical shock from lightning
- **2** Do not use the telephone to report a gas leak in the vicinity of the leak
- **3** Do not place the unit near microwave ovens, radio equipment, or non-ground connected televisions. These appliances may cause electrical interference to the base or handset
- 4 Installation must be performed in accordance with all relevant national wiring rules
- 5 Plug acts as Disconnect Device The socket outlet to which this apparatus is connected must be installed near the equipment and must always be readily accessible
- **6** The system will not operate in the event of a blackout. Please keep a backup phone for emergencies

Intrinsic safety

Do not install the unit in conditions where there is a danger of electrically ignited explosions.

Exposure to sunlight, heat and moisture

Do not expose the unit to direct sunlight for long periods. Keep away from excessive heat and moisture.

Spare parts and accessories

Use only approved spare parts and accessories. The operation of non-approved parts cannot be guaranteed and may even cause damage.

RF compliance information

The users manual or instruction manual for an intentional or unintentional radiator shall caution the user that changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTICES

FCC Note: This device complies with Part 15 of the FCC rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

IC Note: Operation is subject to the following two conditions: (1) This device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device. The term "IC:" before the certification / registration number only signifies that the Industry Canada technical specifications were met.

Privacy of communications may not be ensured when using this telephone.

Information to user: The users manual or instruction manual for an intentional or unintentional radiator shall caution the user that changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

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Tables

Table 1-1	Physical dimensions	1-1
Table 1-2	Power supply	1-1
Table 1-3	Power consumption	1-2
Table 1-4	Environment	1-2
Table 1-5	Cable plugs overview	1-8
Table A-1	RJ45 cable wiring	A-1

Figures

Figure 1-1	Rack Installation	1-4
Figure 1-2	Wall hanger positioning	1-5
Figure 1-3	Fitting the kWS8000 into the wall hanger	1-6
Figure 1-4	KWS 8000 Power plugs	1-7
Figure 1-5	Storing room for two AC power adapters	1-9
Figure 1-6	Installing Interface cards	1–10
Figure 1-7	Installing CPU card	1–11
Figure 1-8	Harnessing cables to the back and out	1-12
Figure 1-9	Harnessing cables to the side and out	1–13

Index

A	Power consumption 1-1
AC power adapters 1-9	Power supply 1-1
E	R
Environment 1–1	Rack installation 1-3
F	S
Flat surface installation 1–4	Safety Cables 1-6
 Interface cable connection 1-11 Interface card installation 1-9	Flat surface installation 1–4 Interface and CPU cards 1–9 Rack mounting 1–3 Wall mounting 1–4
P	Specifications 1-1
Physical dimensions 1-1 Power cables, connecting 1-6	W Wall hanger installation 1–5



RJ45 Wiring

The following table shows the assignments of wire pairs to plug and socket pins of the RJ45 cable.

Table A-1 RJ45 cable wiring

Pin	Pair	Wiring	Connector 1	Connector 2	Connector 3	Connector 4
1	2	tip	1	5	9	13
2	2	ring	1	5	9	13
3	3	tip	2	6	10	14
4	1	ring	0	4	8	12
5	1	tip	0	4	8	12
6	3	ring	2	6	10	14
7	4	tip	2	7	11	15
8	4	ring	3	7	11	15